INTEGRATED AMPLIFIER

AU-X701

OPERATING INSTRUCTIONS







CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

ENGLISH

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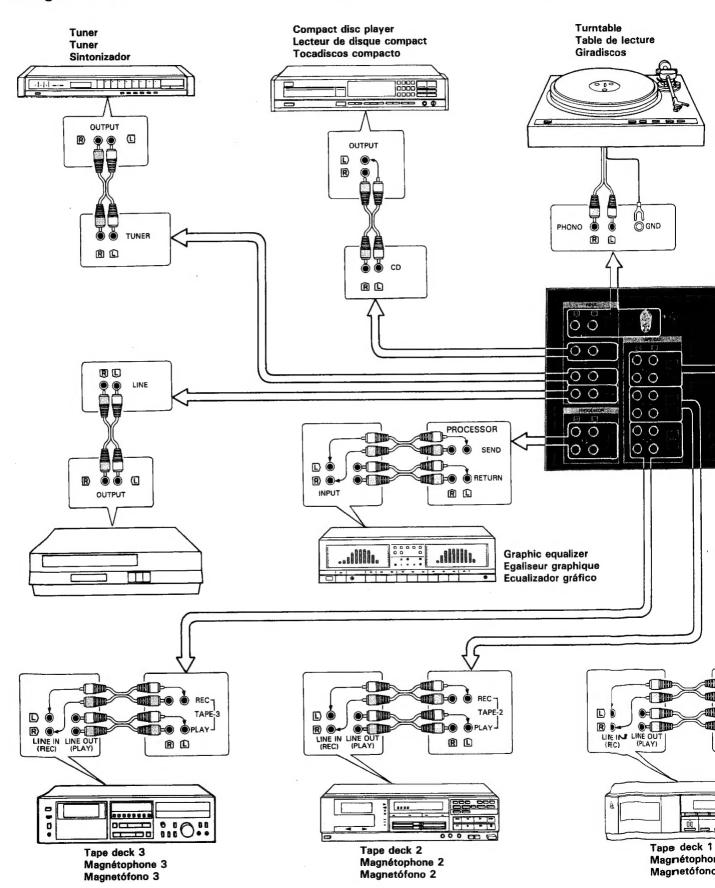
WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

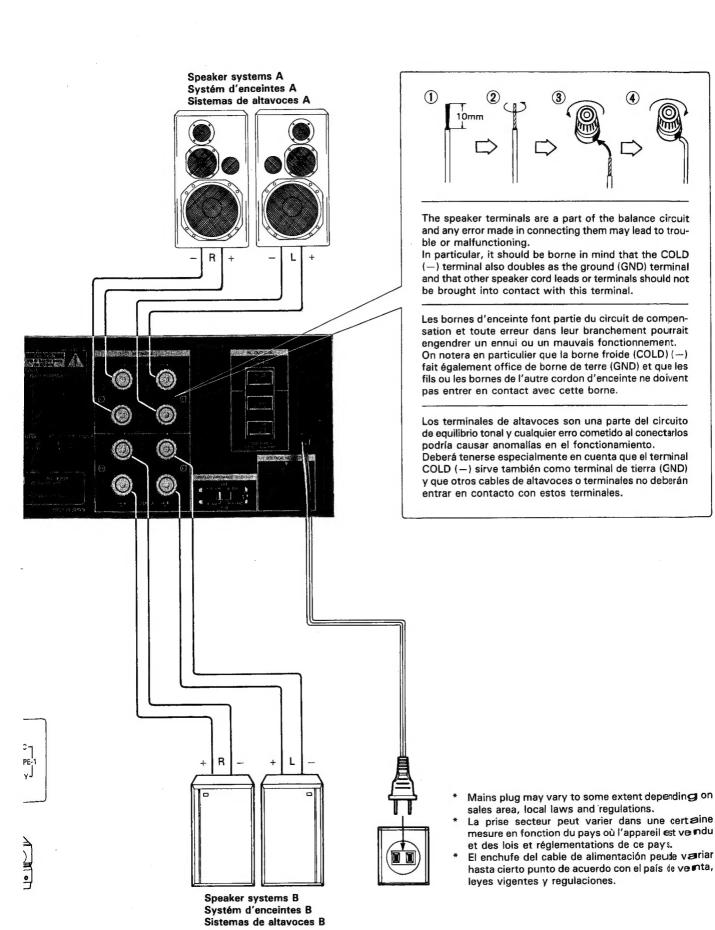
- The Model No. and Serial No. of your unit are shown on its back panel.
- SANSUI attests that this product conforms with EEC directive 82/499/EEC.

Connection diagram (Refer to page 6 for the detailed connections of each units.)

Schéma de branchement (On trouvera, en page 14, des détails sur la connexions de chaque appareil.)

Diagrama de conexiones (Referirse a la página 22 para ver las conexiones detalladas de cada unidad.)





Thank you for purchasing this fine SANSUI product. Taking the time to read these operating instructions carefully before use will acquaint you fully with all its features and help ensure optimum performance.

* In order to simplify the explanation illustrations may sometimes differ from the originals.

Precautions __



Power plug

When disconnecting the power cord from the power outlet, always take hold of the plug, and not the wire, and pull free. Never connect or disconnect the power plug with wet hands since you may receive an electric shock.

* Remember to disconnect the power plug from the power outlet when you do not intend to use the unit for a prolonged period of time.



Do not remove the case and bottom panel

Any inspections or adjustments inside the unit may lead to malfunctions and electric shocks. Do not touch any of the inside parts.

SANSUI's warranty is not effective if a deterioration in the unit's performance results from remodeling inside.



Do not block the ventilation holes

Do not block the ventilation holes on the top of the unit by placing records or other objects over them. This will increase the inside temperature and may lead



to a failure or malfunction. Installation precautions

Do not install the unit in any of the following locations since this may result in a deterioration in performance or malfunction:

- Locations exposed to direct sunlight or near objects radiating heat such as heating appliances.
- * Locations exposed to moisture or humidity.
- * Locations with poor ventilation exposed to dust and dirt.
- * Locations which are unstable and not perfectly flat or which are susceptible to vibration.



Do not wipe with thinners

Wipe the panels and case from time to time with a soft cloth. Using any kind of thinner, alcohol or volatile liquid will mar the surface, cause blotching on the exterior and erase the markings and should therefore be avoided. Do not use insecticide sprays in the vicinity.

This unit dissipates the heat most effectively when installed on a flat surface. Do not stand it up or install it at an angle.

Before connecting the power plug

Before connecting the power plug to an electrical outlet, check to be sure that the unit is set to the proper voltage for your area. If the voltage of the unit is improperly set, fire hazard or damage to the unit may result. If you find that the unit is not set to the proper voltage for your area, follow the instructions listed below:

Units with 120V/220V/240V VOLTAGE SELECTOR at rear panel

These units are set at either 120V, 220V or 240V with the VOLTAGE SELECTOR. To change the voltage use a minus screwdriver to remove the plug, and reinsert it so that the mark (▼) matches the desired voltage.

VOLTAGE SELECTOR

VOLTAGE SELECTOR







Units with 220V/240V VOLTAGE SELECTOR switch at rear panel

These units are set at either 220V or 240V with the VOLTAGE SELECTOR switch. To change the voltage, use a minus screw-driver or similar device to slide the switch.

VOLTAGE SELECTOR

220V ← 240V ~50/60 Hz

At 220V

VOLTAGE SELECTOR

220V ←→24O\ ~50/60Hz

At 240V

· Units without voltage selector switch

Units destined for some areas are not fitted with a voltage selector switch due to laws and regulations existing in those areas. In such a case, the power supply voltage is set tothe voltage used in the area where the unit is purchased.

If the unit is to be used in an area where the power requirements are different, make sure you consult your nearest authorized SANSUI Service Station.

Connections .

Refer to the page 3 connection diagram as you read the following.

Connection precautions

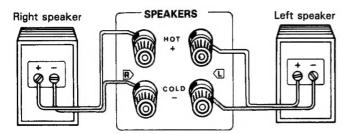
- * When connecting, either disconnect the power plug from the power outlet or turn off the unit's power using the POWER switch.
- Check the left and right channels and connect properly (L to L and B to B).
- * Insert the plugs securely. Improper connection can lead to the generation of noise.

Speaker systems

Connect the speaker systems to the SPEAKERS terminals on the rear panel of the unit with the speaker cords. Two sets of speaker systems can be connected, one to SYSTEM-A and one to SYSTEM-B of the SPEAKERS terminals.

When viewed from the front (the listening position), the speaker mounted on the left should be connected to the L terminals, and the speaker mounted on the right should be connected to the R terminals. Be sure to connect the polarities of the speaker systems and the SPEAKER terminals correctly (+ to +, - to -). If the polarity of one of the speaker systems is connected improperly, sound in the central area between the speakers will appear to be missing, and the position of instruments will not be clear, resulting in a loss of stereo directionality: so take care when connecting.

* When connecting, do not allow the conductor of the speaker cords to be exposed from the terminals and come into contact with other terminals.



About speaker system impedance

When the two speaker systems connected to the SYSTEM-A and SYSTEM-B terminals are to be used separately, their rated impedance may range from $4 \sim 16$ ohms, but when two systems are to be used together (A and B), the rated impedance of both systems should be 8 ohms or more.

If even one of the speaker systems has a rated impedance of less than 8 ohms, the protection circuit may operate during play, or malfunction may result.

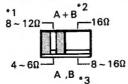
SPEAKER IMPEDANCE SELECTOR switch

Located on the rear panel, this switch should be set to the rated impedance of the speaker systems connected to the unit.

 The rated impedance is shown on the units themselves, or in the operating instructions, of your speakers.

If this switch is not set properly, full output may not be achieved, or abnormal heat may be produced.

SPEAKER IMPEDANCE SELECTOR

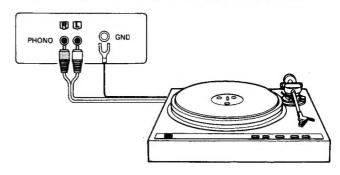


- *1: Rated impedance of speaker system.
- *2: When using both sets of speaker systems connected to SPEAK-ERS SYSTEM-A and SYSTEM-B terminals.
- *3: When using only one set of the speaker systems connected to either SPEAKERS SYSTEM-A or SYSTEM-B terminals.

Turntable

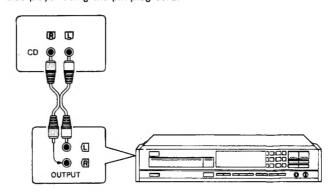
Connect the turntable's output cord L (white) plug to the L PHONO terminal and the R (red) plug to the R terminal.

If your turntable is equipped with a grounding cable, connect it to the unit's GND terminal. But disconnect it if you notice increased hum.



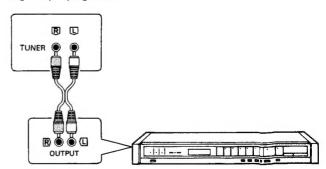
Compact disc player

Connect the CD terminals to the OUTPUT terminals on the compact disc player using the pin-plug cord.



Tuner

Connect the TUNER terminals to the OUTPUT terminals on the tuner using the pin-plug cord.



LINE terminals

The LINE terminals have an electrical performance which is equivalent to that of the CD terminals and TUNER terminals, which means that they can be used as the audio output terminals for a video disc player or TV tuner.

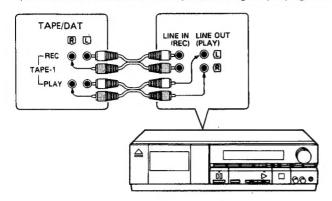
Connect the LINE terminals to the OUTPUT terminals on the component using the pin-plug cord.

Tape deck

There are three sets of TAPE/DAT terminals for connecting a tape deck. This permits up to three tape decks to be connected to perform simultaneous recording or tape dubbing. (1 ▶ 2•3, 2 ▶ 1•3)

Recording connections: Connect the TAPE REC terminals to the input (LINE IN) terminals on the tape deck using the pin-plug cord.

Playback connections: Connect the TAPE PLAY terminals to the output (LINE OUT) terminals on the tape deck using the pin-plug cord.



DAT (digital audio tape recorder) or PCM audio processor

Connect a DAT or PCM audio processor to the TAPE/DAT terminals.

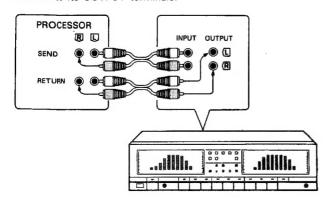
Recording connection: Connect the TAPE REC terminals to the input (LINE IN) terminals on the DAT or PCM audio processor using the pin-plug cord.

Playback connection: Connect the TAPE PLAY terminals to the output (LINE OUT) terminals on the DAT or PCM audio processor using the pin-plug cord.

PROCESSOR terminals

These terminals are used to connect a graphic equalizer or sound processor. They also come in handy for connecting an AV (audio/video) selector unit.

Use pin-plug cords to connect the SEND terminals to the INPUT terminals on the selected component and also to connect the RETURN terminals to its OUTPUT terminals.



AC outlets

This unit is provided with auxiliary AC outlets which are handy for connecting a tuner, tape deck or turntable to supply power to these units.

SWITCHED (100W capacity): The power of the connected components is switched on and off when the unit's POWER switch is operated.

UNSWITCHED (250W total capacity): The power is supplied to the connected components regardless of the position of the unit's POWER switch.

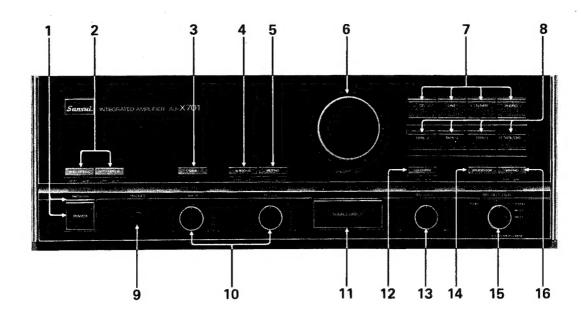
(Models sold on the European market require a single UNSWITCHEDtype AC outlet.)

It is extremely dangerous to connect an electrical appliance having a power consumption exceeding the specified capacity. Before connecting the appliance or components, check its power consumption rating.

 A high voltage flows to the AC outlets and so hairpins or other metal objects must not be inserted since this will result in an electric shock.

NOTE: Depending on the sales area, the profile of the AC outlet may

differ from the photograph.



1 POWER Switch and PROTECTOR Indicator

Power is supplied to the amplifier when this switch is depressed and the indicator winks. After several seconds, the indicator stops winking and lights to indicate that the amplifier is now fully operational.

The power is switched off when the switch is released.

No sound will be heard through the speakers while the indicator is winking. If the indicator changes to winking during operation, it means that the built-in protection circuit has been activated because of trouble inside the amplifier.

2 SPEAKERS Switches

Depress the switch SPEAKERS-A or SPEAKERS-B, corresponding to the terminals to which the speaker system has been connected, to the "ON" position, and sound will then be heard through those speakers.

If two switches are set to "ON", sound can be heard simultaneously through two sets of speaker systems.

When you want to listen to the sound through your headphones and not through the speakers, set all the SPEAKERS switches to the "OFF" position.

* Set the SPEAKER IMPEDANCE SELECTOR switch on the unit's rear panel in accordance with the rated impedance of the speakers you use.

Particularly, be careful when using both A and B speaker systems simultaneously.

3 TONE Switch

When this switch is pressed when the tone controls are rotated to adjust the sound quality, the indicator lights to indicate that the sound can be adjusted.

When the switch is pressed again, the indicator goes off and the tone circuits are isolated from the signal path and the frequency response is made flat.

4 SUBSONIC Switch

When this switch is pressed to the "16 Hz" position, and low frequencies (16 Hz) outside the audible range are attenuated 6 dB/oct by the subsonic filter. When warped records are played, extra-low-frequency noise is produced, resulting in distortion and poor tonal qualities. This filter helps reduce such distortion.

When the switch is pressed again to its "OFF" position the filter function is turned off.

5 MUTING Switch

This switch serves to reduce (mute) the volume by 20 dB. When the volume is to be reduced temporarily, press this switch to its "-20 dB" position and the sound will be muted.

Conversely, when the switch is pressed again to its "OFF" position, the sound will be restored to its previous strength.

6 VOLUME Control

This is used to control the sound heard from the speakers or through the headphones. On the panel the maximum output level is indicated as "0 dB" and the attenuation is displayed in -dB units. The volume is reduced to its minimum at the " ∞ " position and it increases as the control is rotated clockwise.

7 Input Selector Switches

These switches are for selecting your desired program source. When a switch is pressed, the indicator above the switch will light.

PHONO: This switch is pressed when you wish to listen to records on the turntable connected to the PHONO terminals.

TUNER: This switch is pressed when you wish to listen to adio broadcasts from the tuner connected to the TUNER terminals.

LINE: This switch is pressed when using the component connected to the LINE terminals for playback.

CD: This switch is pressed when you wish to listen to the compact disc player connected to the CD terminals.

* Be sure to press the desired switch (one only) firm/.

8 TAPE/DAT Switches

These switches are used for audio playback using the tape deck or DAT (digital audio tape recorder) which has been connected to the TAPE/DAT terminals.

First, the TAPE-1, TAPE-2 or TAPE-3 indicator lights when the TAPE/DAT switch is pressed and tape playback is enabled.

Next, press the switch which correcponds with the conected terminals.

- TAPE-1: This switch is pressed when playing a tape using the tape deck connected to the TAPE/DAT-1 terminals.
- TAPE-2: This switch is pressed when playing a tape using the tape deck connected to the TAPE/DAT-2 terminals.
- TAPE-3: This switch is pressed when playing a tape using the tape deck connected to the TAPE/DAT-3 terminals.
- * When the tape deck or DAT is not being used, press the TAPE/DAT switch again and turn off the TAPE-1, 2 or 3 indicator. The program source selected by one of the input selector switches cannot be heard while any of the above indicators is still lighted.

9 PHONES Jack

This is the jack for the headphones. Connect the plug on the stereo headphones for private listening.

Adjust the volume so that it does not hurt your ears when using the headphones.

 If you do not intend to use your headphones, always ensure that you unplug them.

10 Tone Controls (BASS, TREBLE)

When the TONE indicator lights, the sound quality can be adjusted using these knobs,

The bass sound is emphasized when the BASS knob is rotated clockwise from its "0" position while it is attenuated when the knob is rotated counterclockwise.

The treble sound is emphasized when the TREBLE knob is rotated clockwise from its "0" position while it is attenuated when the knob is rotated counterclockwise.

* When the TONE indicator goes off, it means that the frequency response is flat and that the tone controls are not working.

11 SOURCE DIRECT Switch

This switch is designed to simplify the path inside the control amplifier along which the signals travel and to give the sound extra clarity. When this switch is pressed, the indicator lights and the source direct circuit is selected; when it is pressed again, the indicator goes off and the original circuit configuration is selected.

* The BALANCE control, SUBSONIC switch and MUTING switch do not function even when operated while the indicator is lighted.

12 LOUDNESS Switch

Under low-volume listening conditions, the human ear is less sensitive to bass and high treble sounds; under these conditions low range and high range sounds may be inadequately heard.

When listening under low-volume conditions, depress this switch to the "ON" position, and sounds in the low and high ranges will be boosted, thus preserving the balance of sound as it is heard.

When the switch is present once again and released to the "OFF"

When the switch is pressed once again and released to the "OFF" position, the loudness circuit will be disconnected, returning frequency characteristics to their flat state.

13 BALANCE Control

The volume of the left and right speakers can be adjusted by the BALANCE control. As the control is turned counterclockwise from the center position, the sound from the left speaker becomes louder than that from the right speaker, and vice versa.

Adjust so that the sounds from the left and right speakers are heard with equal volume at your listening position.

14 PROCESSOR Switch

Press this siwtch when using a graphic equalizer or sound processor which has been connected to the PROCESSOR terminals. The indicator lights to indicate that the component can now be operated.

No sound will be heard unless the indicator is off when the component connected to the PROCESSOR terminals is not being used or if no component has been connected to these terminals.

15 REC SELECTOR Switch

Set this to the position which corresponds to the program source to be recorded when making a recording on tape with a component connected to the TAPE/DAT terminals.

TUNER: When recording a broadcast.

OFF: When no recording is to be made.

At this position, the recording circuit is cut off and no electrical effects from the tape deck are felt.

SOURCE: When recording the program source selected by an input selector switch.

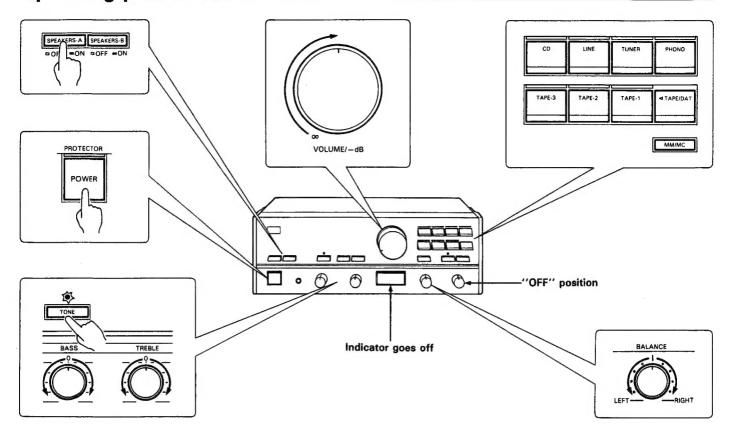
- 1 ➤ 2.3: When recording onto the tape deck or other such component connected to the TAPE/DAT-2 and 3 terminals from the component connected to the TAPE/DAT-1 terminals.
- 2 ➤ 1.3: When recording onto the tape deck or other such component connected to the TAPE/DAT-1 and 3 terminals from the component connected to the TAPE/DAT-2 terminals.
- * At any position except "SOURCE" the program source selected by the input selector switch can be heard during the actual recording.

16 MM/MC Switch

Set this switch to "MM" or "MC", depending on the output voltage of the cartridge used by the turntable. If the turntable uses a moving magnet (MM) type or other high-output cartridge, set the switch to "MM"; if it uses a moving coil (MC) type or other low-output cartridge, set it to "MC" (or "MC TRANS"*1).

^{*}¹ Units destined for the European market employ a step-up transformer in their phono-MC circuits.
This is why the markings below the MM/MC switch read "MM" and "MC TRANS".

Operating procedures



Before starting operation

Check that the controls have been set to the following positions before commencing operation

- * Rotate the VOLUME control counterclockwise as far as it will go and set it at the " \infty " minimum volume position.
- * Set the BALANCE control to its center position.
- * Set the BASS and TREBLE tone controls to the "0" (center) position.
- * Set the REC SELECTOR to its "OFF" position.
- * Set the SUBSONIC, MUTING and LOUDNESS switches to the "OFF" position.
- Set the TAPE/DAT switch so that the TAPE-1, 2, 3 indicators are off.
- Set the PROCESSOR, SOURCE DIRECT and TONE switches so that their indicators are off.
- * Set the SPEAKERS-A or SPEAKERS-B switch to "ON" in accordance with the terminals to which the speakers being used have been connected.

After these checks, press the POWER switch to turn on the power.

The PROTECTOR indicator winks and after several seconds have elapsed it will change to the lighted state and the amplifier will be operational.

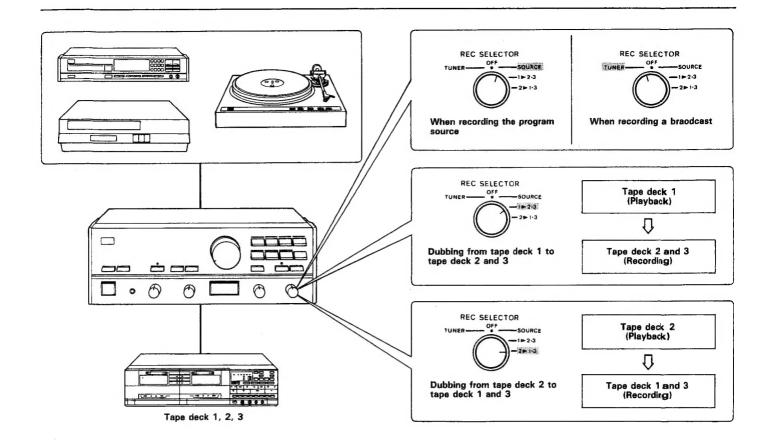
CAUTION

Once tape play has finished, press the TAPE/DAT siwthc and extinguish the TAPE-1, 2, 3 indicators.

If an indicator is still lighted, it will not be possible to hear another program source.

Playing a program source

- Press the desired input selector switch or TAPE/DAT switch to select the program source which you wish to listen to.
 - To listen to a record: Press the PHONO switch, and se the MM/MC switch in accordance with the cartridge of your turantable.
 - To listen to a radio broadcast: Press the TUNER switch.
 - To listen to a compact disc: Press the CD switch.
 - To listen to a component connected to LINE terminals: Press the LINE switch.
 - To listen to a tape: Press the TAPE/DAT switch, and depending on the tape deck used, press either the TAPE-1, TAPE-2 or TAPE-3 switch.
- 2. Operate the program source unit.
- Gradually turn the VOLUME control clockwise until the desired volume level is obtained.
- Attain a balance between the sound of the left and right channels using the BALANCE control.
- To adjust the tone quality, press the TONE switch, and then adjust the BASS and TREBLE controls after the TONE indicator has lighted.
- * When you wish to use headphones, insert the plug of the headphones into the PHONES jack, and press the SPEAKERS switches to the "OFF" position.
- * When listening under low-volume conditions, press the LOUDNESS switch to the "ON" position, and sounds in the low and high ranges will be boosted, thus preserving the balance of sound as it is heard.
- When badly warped records are played, ultra-low-frequency noise is generated, undesirable vibrations are applied to the lowfrequency speakers (woofers) and the sound quality is adversely affected. Press the SUBSONIC switch to the "16 Hz" position, and the ultra-low-frequency noise can be suppressed.



Recording tapes

A record, compact disc, broadcast or the program source of a component connected to the LINE terminals can be recorded by the tape deck connected to the TAPE/DAT recording (REC) terminals.

To record the program source of a component connected to the PHONO, CD or LINE terminals 1. Set the REC SELECTOR to the "SOURCE" position.

- 2. Select the input selector switch which corresponds to the program source (record, CD or LINE) which is to be recorded.
- 3. Start playing the program source.
- 4. Operate the tape deck, adjust the recording level and start recording.

To record a broadcast

- 1. Set the REC SELECTOR to the "TUNER" position.
- 2. Operate the tuner and tune in the desired station.
- 3. Operate the tape deck, adjust the recording level and start
- A broadcast can also be recorded by setting the REC SELECTOR to the "SOURCE" position and pressing the TUNER input selector.
- The VOLUME, BALANCE, TONE and other controls have no effect on the recording level or sound quality of the signals being recorded even if they are operated.

It is not possible to record signals supplied from the PROCESSOR (RETURN) terminals.

Dubbing from tape to tape

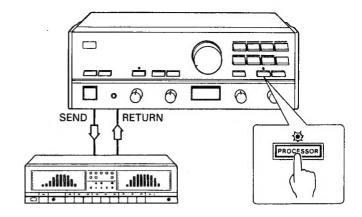
Two tape decks can be used to dub the contents of a pre-recorded tape onto another tape.

- 1. Set the REC SELECTOR switch to the "1 ➤ 2.3" or "2 ➤ 1.3" position.
 - Set to "1 ► 2.3" when dubbing from tape deck 1 to tape deck 2 and tape deck 3; set to "2 ► 1.3" when dubbing from tape deck 2 to tape deck 1 and tape deck 3.
- 2. Operate the playback and recording tape decks and start recording.
- This unit's functions do not allow it to copy tapes from tape deck 3 to tape deck 1 and 2.
- Another program source can be heard through the speakers during tape copying. In this case, select the program source to be heard using the input selector.
- The program source during tape copying can be leard by pressing the TAPE/DAT switch and the switch (TAPI-1, TAPE-2 or TAPE-3) corresponding to the playback deck.
 - If the recording tape deck has a monitoring function(a 3-head deck in which the recording and playback heads are independent), the sound of the recording can be monitored by pressing the switch corresponding to the recording deck.

PROCESSOR switch

Proceed as follows when using the component (such as a graphic equalizer or sound processor) which has been connected to the PROCESSOR terminals.

- Press the PROCESSOR switch and set the indicator to the lighted state.
- 2. Play the program source with this unit and operate the component connected to the PROCESSOR terminals.
- Make sure that the indicator is off when no component has been connected to the PROCESSOR terminals or whine the connected component is not being used.



Specifications _____

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more
than 0.005% total harmonic distortion.
100 watts per channel into 8 ohms.
Load impedance 4 to 16 ohms
Total harmonic distortion less than 0.005% at or below rated min. RMS power output
Intermodulation distortion (60 Hz: 7 kHz = 4:1 SMPTE method)
less than 0.005% at rated
power output
Frequency response (at 1 watt)
Overall (from CD) 1 to 300,000 Hz, +0 dB -3 dB
RIAA curve deviation (PHONO-MM, 20 Hz to 20 kHz) +0.2 dB, -0.2 dB
Input sensitivity and impedance (at 1 kHz)
PHONO (MC)
European models only
PHONO (MC TRANS) 160 μV/16 ohms
PHONO (MM) 2.5 mV/47 kohms
(Max. input capability: 210 mV at 1 kHz, less than 0.01% total harmonic distortion)
CD, TUNER, LINE 150 mV/47 kohms
TAPE/DAT PLAY-1, 2, 3 150 mV/47 kohms
PROCESSOR RETURN 150 mV/47 kohms
Output level (1,000 Hz)
TAPE/DAT REC-1, 2, 3 150 mV into 47 kohms
PROCESSOR SEND 150 mV into 47 kohms

Signal to noise ratio (short-circuit, A-network)
PHONO (MM) 88 dB
CD, TUNER, LINE 110 dB
TAPE/DAT PLAY-1, 2, 3 110 dB
Controls and Filter
BASS ±5 dB at 50 Hz
TREBLE ±5 dB at 15 kHz
SUBSONIC3 dB at 16 Hz (6 dB/oct)
MUTING20 dB
LOUDNESS +8 dB at 50 Hz
(VOLUME: −30 dB position) +6 dB at 10 kHz
Power requirements AC 120V/220V/240V,
50/60 Hz
For U.S.A. & Canada AC 120V, 60 Hz
Power consumption
720 watts Maximum
Dimensions 448 mm (17-11/16") W
160 mm (6-9/16") H
441 mm (17-3/8") D
Weight 17.1 kg (37.7 lbs) net
19 kg (41.9 lbs) packed

- Design and specifications subject to changes without notice for improvements.
- * Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.